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# THE AGRICULTURAL • SITUATION •

August 1938

*A Brief Summary of Economic Conditions*

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THE AGRICULTURAL SITUATION was somewhat improved during the past month. The downward drift of prices of farm products was checked, with a 3-point upturn in the mid-July farm price index. Prospects now are that the 1938 farm output will be sold under improving demand conditions. \* \* \* Farm income will be less than in 1937 but by a smaller amount than was indicated earlier in the year. About the usual seasonal change is expected in the third quarter. This means a July-September income of about 2 billion dollars compared with 2.3 billions in these 3 months of 1937. \* \* \* Cotton under cultivation was estimated at nearly 27 million acres, a 22 percent drop from last year. Record world carry-overs of American and foreign cotton were indicated for August 1. \* \* \* News of the month was the announcement of the wheat loan program, now under way. Cooperating growers are to be lent an average of 59 to 60 cents a bushel at the farm.

# Commodity Reviews

## DEMAND: Pick-up in Sight

A RECENT rise in stock prices, an advance in prices of raw materials, increased buying of some manufactured consumers' goods, a slight pick-up in total industrial activity, and generally improved business sentiment seem to indicate that the turn in consumer incomes and the demand for farm products is now actually at hand.

During the marketing season now beginning the general trend probably will be upward, although improvement is not expected to be rapid or continuous. Recovery of consumer purchasing power and demand will be slower than the pick-up in industrial production.

These changes in the situation will affect different products in different ways. The prospects for improvement already have been reflected in market prices of some nonperishable commodities. Changes in the demand for some products tend to lag considerably behind changes in the general business situation. The demand for farm products as a whole, although on the upgrade, will be slow in reaching a level comparable with that which prevailed before the recession began last year.

## INCOME: Lower

Farm income has dropped off some this year. For the first half of 1938, farmers' cash income from marketings and Government payments totaled 3.3 billion dollars. This is about 13 percent less than the 3.8 billion received from January through June in 1937, but 47 million dollars more than for those months in 1936.

January-June income from farm marketings was 12 percent less than in those months last year. Income from dairy products was higher by 18 million dollars. But all other major groups of farm products have yielded less than in the first half of 1937. Fruits and vegetables showed the

largest decrease. Despite much lower prices, income from grains have held up fairly well due to larger marketings.

Income from marketings in June was slightly above that of May, instead of declining as usual. But it dropped 15 percent from the \$604,000,000 reported for June last year. Government payments were higher, however, so that the total cash income of \$559,000,000 was only 11 percent below June last year. Income from all major groups of commodities, except grains, was lower this year.

Income from farm marketings is expected to make about the usual seasonal change in the third quarter of 1938. July-September cash farm income will, therefore, probably total about 2 billion dollars compared with 2.3 billion in these months last year. Government payments probably will be considerably greater than the very small total of 20 million dollars in these months last year. Payments from the 130 million dollars allotted for cotton price adjustment will soon be under way.

	Income from mar- ketings	From Govern- ment pay- ments	Total
June:			
1938----	\$514,000,000	\$45,000,000	\$559,000,000
1937----	604,000,000	27,000,000	631,000,000
1936----	587,000,000	57,000,000	644,000,000
January-			
June:			
1938----	3,084,000,000	257,000,000	3,341,000,000
1937----	3,499,000,000	330,000,000	3,829,000,000
1936----	3,125,000,000	169,000,000	3,294,000,000

## PRICES: Up Slightly

A 3-point upturn in the level of farm product prices occurred during the month ended July 15. Prices advanced for all of the major groups of farm products, except grain. Corn was up but other feed grains and wheat were down.

The index of prices received by farmers was 95 on July 15, or 3 points higher than a month earlier. This was

# Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products <sup>1</sup>
<b>1937</b>			
July.....	125	133	94
August.....	123	132	93
September.....	118	130	91
October.....	112	128	88
November.....	107	127	84
December.....	104	126	83
<b>1938</b>			
January.....	102	126	81
February.....	97	126	77
March.....	96	125	77
April.....	94	125	75
May.....	92	125	74
June.....	92	124	74
July.....	95	123	77

<sup>1</sup> Ratio of prices received to prices paid.

30 points or 24 percent below July 1937. At 123 the index of prices paid by farmers was 1 point lower in mid-July than a month earlier, but 10 points or 9 percent below the level of a year ago.

The downward trend in prices of farm products that began in January 1937 apparently has been checked, and some recovery appears probable in the last half of 1938. Prices received by farmers, after reaching the recovery high point of 131 in January 1937 de-

clined to 92 percent of the 1909-14 average in May and June this year.

Prices paid by farmers for commodities declined only about 5 percent from January 1937 to July 1938, compared with a 27-percent decline in prices received. Consequently, the purchasing power per unit of farm products in July was only 77 percent of the pre-war average, compared with 101 in January 1937 which was the highest since August 1925.

## ACREAGE: Shifts

The total acreage of crops harvested this year is expected to be close to the acreage harvested in 1937, and close to the average of the preceding 10 years. But acreages in individual crops show important changes.

Corn, estimated at a little over 92 million acres, is about 2 million acres below last year, about 8 million acres below the 1927-36 average. Cotton is standing on less than 27 million acres, a decrease of more than 7 million from last year and 10.5 million acres below the 10-year average.

The decrease in corn and cotton acreages, amounting to more than 18 million acres below average, is partly offset by the huge total of 71 million acres of wheat, nearly 16 million acres more than average.

## Prices of Farm Products

Estimates of average prices received by producers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	July average, 1910-14	July 1937	June 1938	July 1938	Parity price, July 1938
Cotton, lb.....	12.4	12.7	12.4	8.0	8.4	15.9
Corn, bu.....	64.2	70.1	118.1	52.3	53.7	82.2
Wheat, bu.....	88.4	86.2	112.8	69.7	60.8	113.2
Hay, ton.....	11.87	11.78	9.48	7.48	7.11	15.19
Potatoes, bu.....	69.7	81.5	<sup>2</sup> 79.2	63.7	65.5	87.6
Oats, bu.....	39.9	40.9	42.5	25.3	24.0	51.1
Soybeans, bu.....	( <sup>1</sup> )	( <sup>1</sup> )	132.4	85.6	84.8	-----
Peanuts, lb.....	4.8	5.1	4.0	3.5	3.5	6.1
Beef cattle, cwt.....	5.21	5.33	7.46	6.38	6.74	6.67
Hogs, cwt.....	7.22	7.25	10.70	8.00	8.56	9.24
Chickens, lb.....	11.4	12.2	15.3	15.7	15.0	14.6
Eggs, doz.....	21.5	16.7	19.4	18.2	19.9	<sup>3</sup> 21.3
Butterfat, lb.....	26.3	23.5	31.1	23.7	24.2	<sup>3</sup> 31.4
Wool, lb.....	18.3	17.5	31.3	17.7	18.7	23.4
Veal calves, cwt.....	6.75	6.74	8.25	7.73	7.88	8.64
Lambs, cwt.....	5.87	6.09	8.50	6.84	6.84	7.51
Horses, each.....	136.60	136.30	95.20	86.30	85.70	174.80

<sup>1</sup> Prices not available.

<sup>2</sup> Revised.

<sup>3</sup> Adjusted for seasonality.



The area cut for tame hay, increased by good weather for new seedings, is expected to total about 57.6 million acres. This would be an increase of nearly 3 million acres over last year, most of the increase being in timothy and clover.

Other crops expected to show substantial increases in acreage over last year include barley, sweetpotatoes, and flaxseed each up 6 to 8 percent, and soybeans and peanuts up about 10 percent. Beans, potatoes, and tobacco show decreases of 2 to 4 percent.

## PRODUCTION: Good Yields

July 1 acreages and crop conditions pointed to a total production of feed grains—corn, oats, barley, and grain sorghums—about midway between last year's fairly large production and the average during the 1927-36 period, which included some drought years.

There is a large supply of feed grains on farms from last year's crops, and the total supply of feed grains per unit of livestock next winter is expected to be about as large as in 1932, and larger than in other recent years. Hay supplies per unit of livestock are expected to be heavier than in any recent year except 1927. Pastures are better than they have been since 1929.

Ample supplies of most food crops except apples were indicated.

Conditions may change greatly before the crops are harvested, but up to July 1 crops and pastures were good in nearly all States, the chief exceptions being areas centering in northern South Dakota, the Oklahoma panhandle, and central and eastern New Mexico.

## WHEAT: Loans Offered

Following official estimates of a large wheat crop in the United States and the indications of a record world production, the wheat loan program for cooperating producers was announced by Secretary Wallace in mid-July. The rates will average between 59 and 60 cents a bushel at the farm.

A record world wheat crop will mean near-record world supplies for

1938-39. Prospective world supplies for the year beginning July 1, 1938, are estimated at 4,850,000,000 bushels, not including Soviet Russia and China. That's about 465 million bushels more than in 1937-38 and more than the world supply in any year except in the years 1931-33.

A United States crop as large as the 967 million bushels indicated in early July would be about 285 million in excess of the 10-year average domestic disappearance of 683 million bushels. With prospects for exports less favorable than in the crop year just ended, the carry-over into July 1939 might exceed the record carry-over of 378 million bushels on July 1, 1933.

Approximately 100 million bushels were exported during 1937-38. The carry-over stocks from the 1937 crop have been estimated at 180 million bushels.

## COTTON: Big Carry-overs

Nearly 27 million acres of cotton were estimated under cultivation in the United States on July 1. This is about a fourth less than both last year's acreage and the 1927-36 average, and a million acres less than preliminary estimates of the national adjustment allotment. Furthermore, sizable reductions in the cotton crops of China, northern Brazil, and Mexico are reported.

But along with these reports on acreage and crop prospects comes estimates of record world carry-overs of American and foreign cotton.

The world carry-over of American cotton on August 1, has been roughly estimated at around 13.3 million bales, over 7 million bales more than last year's carry-over. The previous record high was 13.3 million in 1932. World carry-over of foreign cotton on August 1 is tentatively figured as 10 million bales, compared with the previous record high of 7.1 million a year ago. These estimates indicate a world carry-over of all cotton of about 23.5 million bales; the previous record of 18.3 was on August 1, 1932.

Consumption of American and foreign cotton dropped off somewhat in June and July. But sales of cotton goods picked up, especially in the United States, and to some extent in England and China. World consumption of American cotton during the season just ended on July 31 has been figured at about 11.1 million bales, a drop of almost 2 million from the 1936-37 season.

## TOBACCO: Prospects Fair

The new tobacco marketing season got under way with the opening of the Georgia and Florida flue-cured markets on July 28. Opening prices were about the same as a year ago.

The 1938-39 outlook for all types of tobacco is, in general, rather favorable, but less so than during the past season.

With July 1 stocks of flue-cured estimated to be greater than a year earlier, the total supply of these types is expected to be as large as, or slightly larger than, in 1937-38 even though prospective production is considerably less than the near-record flue-cured crop last year. Cigarette consumption has held up very well during the past year—a favorable factor. But the market situation may be somewhat less favorable than in 1937.

About a half of the flue-cured crop produced in this country in recent years has been exported, and consumption in foreign countries is increasing. But stocks of American leaf abroad are now more nearly normal than a year ago, and the foreign producing countries other than China have increased their flue-cured crops still further this year. So some decline in foreign demand for American flue-cured is expected.

July 1 conditions pointed to a Burley crop only slightly smaller than the large 1937 crop and 40 million pounds in excess of the 357-million pound marketing quota. Though stocks are below average, on October 1 they are expected to total over 10 percent more than a year earlier. A total supply 6 percent larger than in 1937-38 is in prospect.

Acreage, yields, and production of Maryland type have increased this year. But prospective smaller stocks on January 1, indicate a supply only slightly larger than in 1938. Exports in the first 5 months of 1938 decreased sharply from those of a year earlier.

Acreages of both fire-cured and dark air-cured have been reduced this year. And stocks of these types on October 1 are estimated as 8 million pounds smaller as a result of the byproducts diversion program. Despite the expected decrease in supplies, the market situation for dark tobaccos in the season starting October 1 is expected to continue relatively unfavorable. The trend in exports of these tobaccos has been downward for a number of years, and exports have been running smaller in the past year.

## HOGS: 1938-39 Outlook

The new marketing year begins October 1, and supplies during the year are expected to be materially larger than in the one now closing. But it is believed that the effect of these larger supplies upon hog prices for the year as a whole will be offset, at least in part, by the upward trend expected in consumer demand for meats.

Demand conditions this fall and winter probably will be much more stable than a year ago. Consequently, the seasonal decline in prices from August to December may be considerably less than the sharp drop in that period last year.

More hogs may be in the August-September slaughter supply this year than last, but seasonally fewer hogs than in the late spring and early summer. This larger slaughter supply compared with a year ago, will be largely offset by the smaller stocks of hog products in storage.

The upswing in hog production this year reflects largely the abundant feed supplies in most areas and the fact that corn prices have been low in relation to hog prices. The larger pig crops, however, represent only a partial recovery from the severe droughts

of 1934 and 1936. With plentiful feed supplies from this year's harvests, it is probable that there will be a further increase in the number of pigs raised in 1939.

Pork exports have increased while imports have dropped off sharply since last fall. The shift in the situation reflects chiefly the greater decline in prices of hogs and hog products in the United States than in foreign countries.

### **CATTLE: Good Prospects**

Cattle price prospects for the late summer and fall improved somewhat in July with indications of a pick-up in business activity and in consumer demand for meats.

Supplies of well-finished cattle will be larger but consumer demand weaker than during the late summer and early fall last year. Prices of these cattle are not likely to reach the unusually high levels of a year ago. But in late 1938 and early 1939, as business conditions improve, prices of well-finished cattle may average somewhat higher than a year earlier.

For the lower grades of slaughter cattle, the summer and fall months may bring less than the usual declines. Conditions indicate more than the usual tendency to hold cows, heifers, and calves for replacement stock. Hence, market supplies of the lower grades of slaughter cattle may increase less-than-seasonally, and prices of these grades may decline less than is usual for late summer and fall.

An important factor in the demand for stocker and feeder cattle will be the experience feeders had last winter. Those who bought heavy cattle at fairly high prices before the middle of September and sold them before April probably lost rather heavily. On the other hand, cattle bought after September and marketed after May have done fairly well. So, with an abundance of feed grains, rather heavy feeding of cattle may take place this year.

### **LAMBS: More This Year**

More lambs are going to market than a year ago. With a record lamb

crop, slaughter supplies are likely to continue larger than last year throughout the fall months.

The 1938 lamb crop is estimated at 32.2 million head, an increase of 5 percent over last year and 7 percent larger than average.

The number of lambs slaughtered this fall may be increased also by the larger proportion of fat lambs in supplies from the late lambing areas of the western sheep States and by a probable weak demand for feeder lambs. The extent of the demand for winter feeding is uncertain. But feeders have not been very enthusiastic, because of the unprofitable experience many of them had last year, especially those who marketed before March. Contracting for feeder lambs in the western sheep States started out very slowly but has picked up some in the past week or two. Most of the demand, however, apparently is coming from the Corn Belt rather than from the commercial feeding areas of Colorado and Nebraska.

Later this fall and winter some improvement in consumer demand and prospective better prices of wool and pelts may be strengthening factors in the price situation.

### **DAIRY OUTPUT: Increased**

Production of butter and American cheese in June set new high records.

The increase in butter production over May was less than usual. But compared with June last year, increases were reported in all regions; the increase ranged from 2 percent in the East North Central States to 52 percent in the New England States. The June production of American cheese exceeded 65 million pounds—14 million more than the 8-year average for June.

With production running high, storage stocks of butter and cheese at the half-way mark of 1938 also reached record heights. The July 1 stocks of American cheese totaled nearly 100 million pounds—10 million more than the previous June 1 high in 1937.

Until early winter, prices of dairy products probably will show less-than-



usual seasonal rise. Milk production is larger than a year ago, feed supplies are abundant, and storage holdings of dairy products are heavy.

## CHICKS: Big Increase

The number of chickens raised last year was the smallest in more than a dozen years. And numbers at the beginning of 1938 were the lowest in about 15 years. But this year farmers are stocking up again.

On July 1, around 13 percent more young chickens were reported on farms than a year earlier. And reports from commercial hatcheries indicate that the output of baby chicks from January through July was probably a fifth larger than the average output during these months in the past 5 years. A near-record output of hatchery chicks was reported for June—about three-fourths more than in June last year.

Apparently both egg and poultry producers are rebuilding flocks that had been sharply reduced because of droughts, small feed supplies, and an unfavorable relation of egg and poultry prices to feed prices. In the past few weeks the relationship of egg prices to feed prices has been the most favorable for several years.

With the increased supplies of chickens and the prospective storage demand weaker than last year, a more-than-seasonal decline in chicken prices seems likely during the rest of 1938. Increasing receipts of dressed poultry have been reported at the larger markets.

On the other hand the seasonal advance in egg prices during the last half of 1938 is likely to be greater than usual. The farm price of eggs has been upward during the past 3 months. The movement of eggs into storage has been much lighter than usual.

## APPLES: Smaller Crop

The apple marketing season is under way. Though the crop is below average, other factors enter the price picture.

Following one of the largest apple crops produced in the last two decades,

the total crop this year was indicated by early July conditions to be about 134 million bushels—one-third less than last year and one-tenth smaller than the 1927–36 average. The apple crop is indicated to be relatively smallest in the Central group of States, where early spring freezes materially reduced prospects.

Large supplies of other fruits apparently will be available during the marketing season for the 1938 apple crop, thus partially offsetting the reduced apple production.

Of significance to all fruit growers and distributors is the fact that the present level of incomes of industrial workers is much lower than a year ago. Incomes of industrial workers are a measure of consumer purchasing power and, consequently, an indication of consumer demand for fruits and other farm commodities. Although incomes are relatively low now, it seems likely that they may trend upward during the apple marketing season.

Smaller crops of apples and other fruits than last year are in prospect in most European countries. This may mean some improvement in the foreign demand for our apples.

## TRUCK CROPS: Plentiful

Acreage of nearly all of the commercial truck crops for fresh market distribution is larger than a year ago. And weather conditions have been generally favorable to high yields. Acreage increases include a gain of 17 percent for late cantaloups, 7 percent for late cabbage, and 6 percent in the late-producing acreage of cauliflower.

Cucumber acreage shows an increase of 10 percent from that of a year ago.

Stocks of the principal canned vegetables are considerably greater than a year ago. Supplies of canned snap beans were about 10 times those of mid-1937, sweet corn about  $5\frac{1}{2}$  times larger, green peas about double, and tomatoes about 50 percent more. This year acreages of these truck crops for canning and manufacture, however, nearly all show decreases.

# Wheat Loan Program Under Way

WHEAT loans are a part of the integrated Ever-Normal Granary program for wheat provided for in the Agricultural Adjustment Act of 1938. They are being offered producers by the Commodity Credit Corporation on the 1938 crop as a means of temporarily withholding part of this year's surplus wheat from the market. When the loan was announced by Secretary Wallace, indications were that wheat supplies for the current season would approximate 1,147,000,000 bushels, exceeding domestic requirements and indicated exports by nearly 400 million bushels.

The loan program has automatically gone into effect under the provisions of the Agricultural Adjustment Act of 1938. The Act makes wheat loans mandatory when the farm wheat price on June 15 or at any time thereafter is less than 52 percent of parity, or when the July estimate of the wheat crop exceeds a normal year's domestic consumption and exports. It was the latter provision that made the loan program operative this year, the July crop estimate for wheat exceeding a normal year's domestic consumption and exports by approximately 214 million bushels.

THE LOANS are in the nature of emergency action, designed to promote orderly handling of a wheat surplus until other parts of the program can take effect. The other parts of the program are: acreage allotments to balance production from year to year; crop insurance enabling wheat growers to use their surplus wheat to insure future supplies; purchase of surplus wheat products for relief distribution; and marketing quotas which may be used after 1938, subject to approval of two-thirds of the wheat growers when other measures fail to keep supplies within bounds.

The loan rate will average between 59 and 60 cents a bushel at the farm for the country as a whole. This

approximates 52 percent of the parity price for wheat at the beginning of the marketing year, or the minimum provided under the Act, which admits administrative discretion within the range of from 52 percent to 75 percent of parity. A high loan rate would tend to prevent free movement of wheat into export, and this was one of the reasons for setting the rate at the allowed minimum. For the principal wheat areas, a schedule of basic loan rates for terminal markets was set up, and the rate for any farm is determined by deducting freight and handling charges from this basic rate. In Eastern and Southern States, flat loan rates are established by States.

Wheat loans are available only to wheat producers cooperating in the AAA Farm Program. Grain stored as collateral must be of specified grade, quality, and moisture content. These factors will limit the amount of the wheat surplus that will come under the loan program.

LOANS bearing interest of 4 percent will be extended on wheat stored on the farm or in approved commercial warehouses. Farm-stored wheat is acceptable only in designated areas where wheat can safely be stored on the farm. The maturity date on wheat thus stored is May 31, 1939. Where the collateral wheat is stored in commercial warehouses, the maturity date is 7 months after the loan is made. The Commodity Credit Corporation will pay storage charges in the event it acquires wheat placed under the loan. Loans will be made through December 31, 1938.

No restrictions, other than grade and quality requirements, are placed on the amount of the 1938 wheat crop on which a cooperating wheat producer can obtain a loan.

J. W. TAPP,  
*Agricultural Adjustment  
Administration.*

# Trade Barriers in the Dairy Industry

Before the adoption of the Constitution of the United States in 1789 each State had full control over its trade with other States.

Massachusetts adopted duties as high as 25 percent on the value of goods from other States. New York imposed taxes on shipping entering her harbor from Connecticut and New Jersey. Both these States retaliated—Connecticut by an agreement with her merchants to suspend commercial relations with New York, and New Jersey by heavily taxing a New York lighthouse erected on New Jersey soil. Georgia resented imposts by South Carolina on her commerce and threatened reprisals.

Writing in 1789 to deplore this situation and urge the adoption of our Federal Constitution, Alexander Hamilton said:

"the interfering and unneighborly regulations of some states, contrary to the true spirit of the Union, have, in different instances, given just cause of umbrage and complaint to others, and it is to be feared that examples of this nature, if not restrained by a national control, would be multiplied and extended till they became not less serious sources of animosity and discord than injurious impediments to the intercourse between different parts of the confederacy."

After 150 years of tremendous economic development under national control of interstate commerce, the problem of State laws which affect interstate trade has again become important. This is the second of a series of articles on this subject.—Ed.

**I**N THE dairy industry are striking examples of trade barriers against the interstate movement of farm products. In some cases, barriers have been erected frankly to exclude or to hamper the sale of out-of-State dairy products, in others the barriers are disguised as sanitary laws and regulations.

Many cities and States limit the area from which cream or milk may come by restricting the area to which they will send inspectors or in which they will grant licenses or permits. In New York City the inspection has been limited in the last 12 years so as practically to exclude western cream from that market.

Many towns and cities limit the inspection area informally. The board of health, usually elected or appointed locally, may find it desirable, for example, to cooperate with local producers or distributors by limiting the inspection area.

Sometimes the decision as to what producers shall be inspected is left almost exclusively to local inspectors. The members of one milk producers' association near a small New England town are reported to be within a 3-mile radius of the town. No dairies are approved beyond this limit.

A common practice in some parts of the country is to limit the area in which inspection is conducted at city expense. Beyond this limit, official inspection may be afforded if some outside agency, the producer or perhaps the distributor, bears the cost.

**M**ANY STATES now require the inspection or licensing of all farms shipping fluid milk into the State. By limiting the number of out-of-State farms inspected they may reduce importations and so give a larger part of the State market for fluid milk to local producers.

Ice cream manufacturers in Pennsylvania, for example, complain of Pennsylvania inspection restrictions which make difficult or unprofitable



the purchase of western cream. The Federal Trade Commission reported in 1935 "indications that Connecticut has used its milk inspection laws advantageously in keeping out milk from other States."

Rhode Island since 1931 has had legislation requiring inspection and registration of farms producing milk for sale in Rhode Island. By an amendment of January 1936, re-registration of all farms was required. In the process, 62 registrations of farms in Connecticut and Massachusetts were terminated, and only 1 distributor in Vermont was re-registered.

The records show that shipments of milk into Rhode Island from Vermont have been cut nearly in half since 1931, shipments have entirely ceased from New Hampshire, and from Massachusetts and Connecticut shipments have been increasingly restricted to the parts of these States closely adjoining Rhode Island.

**A** TYPE of market limitation which comes under the head of health regulations has to do with pasteurization and transportation to market. In 1932 a New York up-State city required that no new permits should be issued to milk distributors unless they had a processing plant within the city limits.

A number of other cities have a similar requirement. Rhode Island stipulates that normally all milk shipped into the State shall go directly from the farm where it is produced to the consumer or dealer within Rhode Island. Farmers located any appreciable distance from the Rhode Island boundary are thus at a disadvantage.

There is an increasing tendency to impose inspection restrictions on butter, condensed and evaporated milk, cheese, and ice cream mix as well as on milk and cream. Pennsylvania, for example, has a law requiring inspection of the farm source of supply of all dairy products sold in the State.

To the extent that the Pennsylvania law is enforced and inspection by Pennsylvania officials is required, a

rather serious burden is placed on interstate trade. Thus, ice cream manufacturers who use dry milk must either use dry milk produced in Pennsylvania or procure it from companies which have gone to the expense of financing Pennsylvania inspection of their western farm sources of supply for dry milk.

At least one Ohio city has regulations similar to those of Pennsylvania. All evaporated and condensed milk sold in this city must come from farms inspected by its officials. One company has had to bear the expense of sending inspectors to inspect Wisconsin farms.

**T**HERE HAS been a striking increase in consumption of evaporated and condensed milk in recent years, attributed largely to the relatively high prices for fluid milk. Fluid milk producers, alarmed at this trend, have sought, and in some cases obtained, legislation unfavorable to evaporated and condensed milk.

Pressure has been brought to bear in some States to forbid the sale of dry, evaporated, or condensed milk from herds unless the herds have been certified as free from tuberculosis. Washington and Utah have such regulations, and a number of Eastern States have had similar provisions strongly urged in their legislatures.

Georgia has placed a sales tax of 5¢ per pound on dry milk where the product is used for producing fluid milk.

Recently, there has been agitation in certain eastern States for the passage of State laws requiring labels on food products showing the State of origin. This would, of course, increase somewhat the cost of such products as condensed milk.

**T**HE INSISTENCE of cities and States upon their own regulations and inspection by their own officials reaches rather absurd limits in areas where production is normally carried on for more than one market. Ice cream manufacturing plants in many parts of the country report, for ex-



ample, that farm sources of cream supply are often subject to inspection by three, four, or even more State, county, or city health departments.

The Federal Trade Commission in its investigation of the New York Milk Sales Area found that "usually, each State, subdivision of a State, and municipality, insists on making its own inspection and will not accept inspections by authorities of other jurisdictions.

"Operators of country receiving plants and farmers supplying them sometimes find it necessary to submit to as many as 7 or more separate inspections."

A Vermont State official recently wrote that "the utter lack of uniformity in inspection requirements among the States into which our dairy products are shipped is a serious handicap to Vermont dairy interests \* \* \*. If these requirements could be made uniform it would be very helpful indeed."

Occasionally an absurd situation has arisen in certain parts of the country where farmers or receiving plant operators have found that in order to conform with the requirements of one authority they must violate those of another.

**H**EALTH regulations, so far as they are directed at purely health objectives, need place no restraints on interstate or local commerce. On the other hand, if board of health regulations are to be used for protecting local dairy interests, then interstate trade may be restricted.

A major step forward would be accomplished if States and municipalities would recognize and clearly state the purpose of their regulations. If after open consideration the decision is made to protect State dairy interests, then the question may well be faced as to whether this should be done through health regulations or by more direct means.

GEORGE R. TAYLOR.

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## Wheat Import Barriers Up Again

**T**HE DECLINE in prices resulting from the prospective largest world wheat crop on record is causing the wheat importing countries to give serious consideration to measures designed for the protection of domestic prices.

About a year ago there was apparent a rather widespread movement on the part of the importing countries to reduce import barriers and export aids. (Agricultural Situation, June 1937.) This was due in part to the relatively short supplies and high prices which facilitated the maintenance of domestic prices at the level desired and in part to the desire of importing countries to prevent an increase in the cost of bread.

This year, however, the movement is in the other direction. The wheat crop in the European importing countries promises to exceed that of last year so that import requirements will

probably be smaller. This together with the large export surplus in the exporting countries is expected to keep wheat prices at a relatively low level during the current crop year.

**A**S A RESULT, many of the importing countries are devoting greater attention to measures designed to divorce domestic prices from the influence of world prices. Some countries maintain fixed prices and quantitative control of imports in the form of quotas and foreign exchange allotments. Others protect domestic prices largely through import duties. Of the latter countries, the Netherlands has already increased its import duties, Belgium has reestablished an import license fee, and the sliding scale duty in Denmark has again become effective. It is probable that a number of other countries will follow suit.

D. F. CHRISTY.

# Tenants Buying Farms

THREE years ago Congress passed the Farm Credit Act of 1935 with the hope of widening the road to farm ownership by providing second- as well as first-mortgage loans for farm purchasing. Since then nearly 60,000 farmers, farm tenants, and farm laborers have bought farms with the assistance of mortgage loans and other types of credit extended through the Farm Credit Administration.

Most of these families bought land in their own communities, either from retired farmers, from the Federal land banks or from other owners. Loans are not made for the full purchase price. All of the new owners—about a third of whom were tenants purchasing for the first time—made suitable down payments on the properties. To finance the remaining indebtedness, the 12 Federal land banks and the Land Bank Commissioner have advanced more than \$130,000,000 in mortgage loans, purchase money mortgages, and sales contracts. Over \$50,000,000 was loaned last year.

So far in 1938, the demand for farm-purchase loans is about as great as at any time since the upward trend started in 1935. More than 2,000 applicants are obtaining purchase loans each month.

MANY of the new owners in the last 3 years were tenants who were already living on the farms they have now purchased, particularly in the case of farms bought from the Federal land banks—which account for a large number of these purchases. These farms are usually sold on the basis of 20 to 30 percent down payments. The average cash down payment increased gradually from 1933 through 1937.

The Federal land banks since they began operating in 1917 have made first-mortgage loans up to about 50 percent of the value of the farm property—for purchasing and for other purposes. But not many tenants and young farmers could qualify,

Two Government agencies—the Farm Credit Administration and the Farm Security Administration—are administering laws designed to facilitate the purchase of farms by farm laborers, tenants, and others.

The results obtained to date by the Farm Credit Administration are described in the accompanying article. Next month, the activities of the Farm Security Administration in aiding persons to become farm owners will be reported.—Ed.

because they did not have the money to make a down payment of 50 percent. The act of 1935 gave these men a better chance. Second- as well as first-mortgage loans of the Land Bank Commissioner, previously made only for refinancing, were also made available for purchasing.

THE tenant or other farmer who wishes to utilize these financing facilities selects a farm of his own choosing. As soon as he has made an agreement with the seller—possibly taken an option on the property—he goes to the secretary-treasurer of the nearest national farm loan association. There are more than 4,000 of these associations located in farm communities all over the United States.

Through these associations, the land bank may lend up to about 50 percent of the normal value of the property on a first mortgage; and the Commissioner an additional amount, provided the total is not more than 75 percent. For instance, on a farm appraised at \$4,000, the maximum that may be loaned is \$3,000. If the two loans plus the farmer's down payment equal the selling price, the farmer is then in a position to complete the purchase. The seller gets all cash for the property, and the farmer has 20 to 30 years to repay both loans.

On the land-bank loans—through most associations—the basic contract rate of interest is 4 percent, temporarily reduced by Congress to 3½ percent until July 1, 1940. The rate on the Commissioner loan is 5 percent, temporarily reduced to 4 percent.

THE presidents of the 12 Federal land banks, recently meeting in Washington, reported that tenants and other farmers of small means are now creating the main demand in the farm real estate market. They

have replaced nonoperators and absentee investors who were buying large acreages of farm land 2 or 3 years ago, either for investment or as a hedge against possible inflation.

Although Federal land bank and Commissioner loans for refinancing have declined since 1935, last year a larger percent of loan proceeds went for farm purchasing than at any time in the 21-year history of these institutions.

R. C. DORSEY,  
*Farm Credit Administration.*

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## The Cost of Country Medical Service<sup>1</sup>

THE cost of medical services represents about 6 percent of the expenditures for goods and services for farm family living. This is equivalent to an annual expenditure of about \$265,000,000 for all farm families in the United States, or an average of \$39 per family. Other medical costs, such as medicines, drugs, health and accident insurance, bring the total cost of medical care for farm families to about \$350,000,000, an average of \$51 per family per year or about 8 percent of the family budget.<sup>2</sup>

Expenditures for farm family living include about 85 percent for commodities and 15 percent for services. Of the latter, medical services are the most important single group. In the past, the Bureau of Agricultural Economics has indicated the trend of prices paid by farmers for articles on the basis of prices paid for commodities only.

Data on changes in service rates are needed to complete the picture. When, as, and if provision is made for collecting current data on service rates to farmers, these service rates should be combined with commodity

This is the first of a group of articles dealing with prices paid by farmers for services and commodities since 1910.

It summarizes briefly a more comprehensive report by the Bureau of Agricultural Economics in developing income parity estimates for use by the Department of Agriculture in administering the Agricultural Adjustment Act of 1938.

Other articles in this series will deal with prices paid by farmers for machinery, building materials, clothing, food, electricity, and other commodities and services.—Ed.

prices to form a comprehensive measure of changes in rural living costs.

The Bureau of Agricultural Economics in 1936 collected data on rates charged for selected medical services to farmers in the periods 1910–14, 1924–29, 1932, and 1935–36. The results of this survey indicate that medical service rates to farmers increased 21 percent from 1910–14 to 1924–29. The economic recession in the early thirties was accompanied by some decline in rates. Although some changes occurred among the various geographic regions from 1932 to 1935–36, the average of rates for the country as a whole was unchanged at 16 percent above the 1910–14 level.

<sup>1</sup> These estimates were prepared by Arthur G. Peterson and Nathan M. Koffsky, under the direction of the Farm Income Committee.

<sup>2</sup> Based on data obtained in a study of consumer purchases by the Bureau of Home Economics, 1935–36. Although the average cost of medical care was \$51, the cost for any one family may vary from zero in some years to several hundred dollars in other years.



SINCE medical service rates have not changed greatly and medical care constitutes less than 10 percent of the budget, the adding of an index series of these rates to index numbers of prices paid by farmers for commodities would have very little effect upon the index. The tendency would be to smooth the index. It would be slightly lower in the period 1924-29, slightly higher in 1932, and slightly lower in 1936. As a measure of purchasing power it would be more accurate than the index number of prices of commodities but not very different.

The increase in medical service rates in the last 25 years has been accompanied by an improvement in the quality and availability of medical services. The marked improvement in transportation facilities along with an increase in the number of hospitals has made medical services more easily and quickly available.

More patients now come to the doctor, and much of the time he formerly spent in traveling to and from farm homes can now be devoted to rendering additional services. Except for this increased efficiency in the use of the doctor's time, there probably would have been more of an increase in rates for medical services in rural areas in the last 25 years.

THE increase in fees from 1910-14 to 1935-36 varied somewhat among the several services. Physicians' fees increased 13 percent from 1910-14 to 1935-36; dentists' fees were up 22 percent; oculists' and optometrists' fees 14 percent; hospital charges 17 percent; and nurses' fees were 23 percent higher.

During the last decade or more, rates in the New England and Middle Atlantic regions have been maintained at relatively high levels compared with 1910-14, reflecting, in part, the greater stability of farmers' incomes in these regions. On the other hand, in the West North Central region, where the severe droughts in 1934 and 1936 reduced farm income sharply, rates in

1935-36 were only 9 percent above the pre-war level.

Index numbers of changes by regions are shown in the following table. In general, medical service rates to farmers and the expenditures for medical services are highest in the Pacific and Mountain States and lowest in the Southern States.

#### Index Numbers of Fees for Medical Services to Farmers, by Regions, 1910-14, 1924-29, 1932, and 1935-36

[1910-14=100]

Region	1910-14	1924-29	1932	1935-36
New England.....	100	133	132	133
Middle Atlantic.....	100	138	133	132
East North Central....	100	123	118	119
West North Central....	100	117	112	109
South Atlantic.....	100	121	118	122
East South Central....	100	124	121	121
West South Central....	100	119	107	111
Mountain.....	100	116	110	112
Pacific.....	100	115	113	112
United States.....	100	121	116	116

(The index numbers of fees for medical services are essentially price indices. They show the trend in the cost of a fixed composite quantity of medical service as a percentage of the 1910-14 average. The index numbers should not be considered as a measure of the changes in actual expenditures for medical services, since the total amount of medical services received as well as the relative proportion of the various services may vary considerably over a period of years.)

CITY families spend considerably more for medical services than do farm families. In a survey of white farmers, conducted by the Committee on the Cost of Medical Care,<sup>3</sup> from 1928 to 1931, the average annual charge per person, according to place of residence, was found to be \$32.39 in cities of 100,000 or more population compared with \$15.80 in rural areas and towns of less than 5,000 population.

O. C. STINE,  
*Chairman, Income Committee.*

<sup>3</sup> This committee, privately financed, was organized in 1927. Its reports have been published by the University of Chicago.



# The Apple Export Situation

APPLES have been exported from the eastern seaboard of the United States for more than 150 years. It was not until the middle of the 19th century, however, that exports exceeded 300,000 bushels. By 1880 exports had jumped to more than 3 million bushels, and reached 6 million bushels shortly after the turn of the century.

The upward trend was interrupted during the World War, but in the early 1920's exports increased sharply as a result of the development of the all-water route to Europe from the Pacific Coast States, the increased production of apples in that area, and the increase in the European consumption of apples. More than 12 million bushels were exported in the 1923-24 season.

Three years later exports reached an all-time peak of more than 21 million bushels. This figure was almost equalled on two occasions in the next 5 years, but since the 1931-32 season there has been a marked decline. Exports in 1936-37 were the smallest in 14 years. In the 12 months of the season just ended on June 30, exports amounted to 10,958,000 bushels.

SEVERAL factors are responsible for the decline in apple exports in recent years. During most of the 19th century, and until after the World War, apples met with few restrictions in international trade. The swing toward much greater government control of foreign trade, which began in the late 1920's largely as a result of the depression but partly also because of the trend toward increased economic self-sufficiency, has radically changed the picture.

Duties on apples were imposed by the United Kingdom and tariffs were also adopted and increased in almost all other countries. More harmful were the various quantitative restrictions on international trade exchange restrictions, quotas, import permits, and the like, as a result of the economic

and financial crisis and intensified economic nationalism.

The departure from the gold standard by the United States in March 1933 favored exports. The devaluation of the dollar enabled United States exporters to compete with other exporting countries and cheapened the foreign price of American apples, but it soon became evident that something more fundamental would have to be done to reduce import restrictions if foreign trade was to be restored to the pre-depression scale.

FROM THE long time standpoint, one of the most constructive recent developments has been the trade agreements program designed to break down trade barriers against our products in foreign markets. Also, by reducing some of our own unnecessarily high tariffs, this program enables other countries to sell more to us, thereby increasing their ability to buy our products.

The trade agreements program has been particularly successful in reducing foreign barriers on apples. Concessions have been obtained in 16 of these agreements either in the form of duty reductions or of binding the duties at existing low rates. In addition, larger quotas have been obtained in some countries.

It is hoped that a concession on American apples can be obtained in the agreement now being negotiated with the United Kingdom since that country usually takes one-third to one-half of our apple exports.

During the year just beginning it is expected that the export demand for apples will improve. Although it is too early for reliable forecasts of the apple crops in Europe, there is little question but that the severe freezes in April which followed a long period of warm weather caused heavy losses. The apple crops are expected to be small or below average in most European countries.

A. C. EDWARDS.

# Problem of Large Rice Supplies

**R**ICE PRODUCTION in the United States has expanded sharply in recent years. From less than 40 million bushels in 1935, production increased to 49 million in 1936 and to 53 million bushels in 1937. Indicated production for 1938, on the basis of July 1 conditions, is 53.3 million bushels or more than 10 million bushels above the 1927-36 average. A crop of this size would be the largest on record.

The total value of the crop likewise has increased greatly since 1932, inasmuch as increasing production has been accompanied by a substantial improvement in the general business situation and in demand for rice. The value of the 1936 crop was estimated to be over \$40,000,000, but the value of the 1937 crop was probably somewhat less.

The larger supplies of rice during the past year were disposed of by increased domestic utilization, larger exports, and some increase in shipments to Puerto Rico, Hawaii, and Alaska. Near-record shipments to insular possessions have been reported, and exports to foreign countries in 1937-38 probably were the largest since 1931-32. The large production in rice of the past 3 years has created a problem of surpluses. Continued production at this high level will necessitate either large exports or an increase in the present rate of domestic utilization.

During the World War period, prices stimulated production and we shifted from an import basis to an export basis. In the years just following the World War an average about one-third of the crop was exported. A sharp recession in prices followed the war and production in the period 1923-25 declined to considerably below the 1919-22 level.

**P**RODUCTION of rice in this country is confined largely to three well-defined areas. The largest of these is along the Gulf of Mexico, in Louisiana and Texas, where the industry developed rapidly following 1895.

The increased production of rice in recent years has again brought up the question of surpluses. The problem is essentially one of increased acreage and yields, relatively low exports, and a small consumption per capita.

In the accompanying article, the writer has taken a look into these phases of the 40 million dollar rice industry.—Ed.

Production later got under way in east-central Arkansas which developed into a second important producing section. The other rice area is in the Sacramento and San Joaquin Valleys of California, where production began in 1912 and expanded rapidly. While small quantities of rice are grown in South Carolina, Mississippi, Missouri and Georgia, production in these States is insignificant from a commercial standpoint.

Yields per acre, as well as acreage, have increased steadily. The average yield in Louisiana increased from about 26 bushels per acre for the period 1895-99 to more than 40 bushels per acre in each of the past 5 years. In Texas and Arkansas yields have increased 15 and 11 bushels per acre, respectively, since the pre-war period. In California they are about 18 to 20 bushels per acre higher than in the early 20's. The higher yields may be attributed to the use of improved varieties and to improved methods of growing and harvesting.

Blue Rose has become the predominant variety in the Southern States, and it is estimated that over 60 percent of the 1937 Southern crop was of this variety. Early Prolific also has become important, especially in Arkansas; it now comprises about a fourth of the southern crop. In California, Caloro and Colusa (Japan) rice are by far the most important varieties, making up about 90 percent

of the 1937 crop. These four varieties combined made up about 85 percent of the total United States rice crop in 1937.

**T**HE CHART shows the increase in rice production in the United States during the past 40 years, together with changes in United States consumption, net exports, and shipments to insular possessions. Our consumption has increased some during the past 25 years. But most of the increase in production has gone into insular shipments and exports. Domestic consumption was at a relatively high level during 1917, 1918, and 1919, and also during the past 2 or 3 years when production has been large and exports have remained at a comparatively low level.

In summary, it now appears that a solution of the rice surplus problem depends on one or more of the following developments:

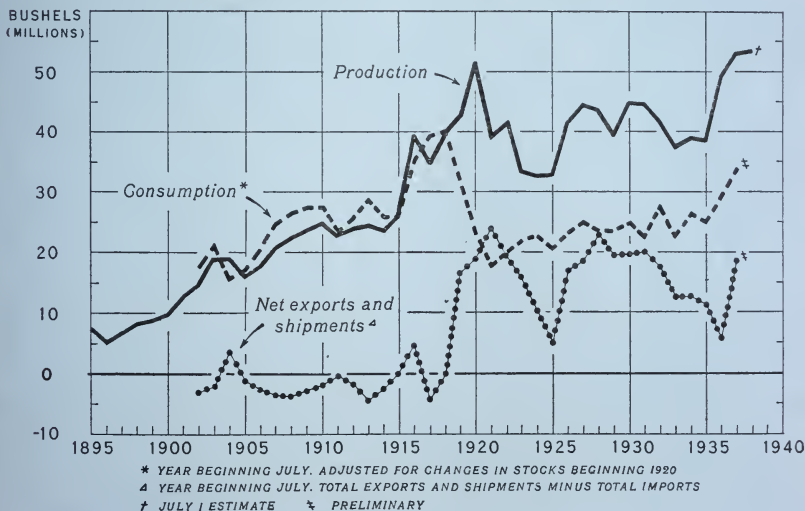
**F**IRST, a general expansion in both domestic and foreign demand. Such an expansion would allow for the disposition of rice crops as large as those of the past 2 years at returns more favorable to producers. Per capita consumption of rice in the United

States has averaged only about 5 or 6 pounds per year during the past 15 years which compares with over 100 pounds a year in Puerto Rico, over 200 in Hawaii and 18 to 20 pounds per year in Alaska. An increase in foreign demand is dependent upon general improvement in the purchasing power in foreign countries, together with some changes in trade relationships with European countries to facilitate increased trade.

**S**ECOND, a general reduction in the size of the crop so that production will not greatly exceed domestic requirements, leaving the quantity to be exported no larger than will be taken in foreign countries that normally pay prices comparable with those paid in local domestic markets. The large supply of the past year has been considerably above domestic requirements, which has necessitated such an overflow of rice into foreign markets that it has resulted in a low level of American rice prices.

The third consideration is the reduction in the cost of producing rice from the present level. Improved methods and higher yields have reduced per unit cost of production sub-

RICE, ROUGH: PRODUCTION, CONSUMPTION, AND NET EXPORTS AND SHIPMENTS, UNITED STATES, 1895-1938





stantially since 1912. Additional reductions in costs might make it possible to maintain production near the present level or to further increase it and operate on a profitable basis even at lower rice prices. In this case, rice

prices may be established at a lower level, domestic consumption increased, and the United States might again become an important exporter of rice in the world market.

M. CLOUGH.

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## Distribution of Hog Slaughter

**H**OG PRODUCERS this year have done the unusual—they have marketed their hogs quite differently from what they have done in other years when supplies of feed and the ratio of hog prices to corn prices have been similar to those of the present year.

As a result, the seasonal distribution of hog slaughter during the current marketing year (October 1, 1937, to September 30, 1938) promises to be considerably different from what was generally expected 9 or 10 months ago.

It was pointed out in the annual Hog Outlook Report last November that the seasonal distribution of slaughter would probably follow the pattern of other years of high hog-corn price ratios and generally abundant feed supplies. In such years the number of hogs slaughtered in the first quarter (October through December) has usually been smaller than in the second quarter, and the proportion of the total 12 months' slaughter that occurs in the first 3 or 6 months has been considerably below average.

But not so in 1937-38. \* \* \*

**T**HOSE WHO closely follow the hog situation recognize the hog-corn price ratio as an important and often a dominating factor in determining the seasonal distribution of slaughter, as well as a controlling factor in causing changes in hog production. When the ratio is low and when returns from hogs in relation to the cost of corn are unprofitable, hogs are marketed early and at relatively light weights. On the other hand, when the ratio is high and a good profit is being realized on the corn fed, marketings are delayed and hogs are fed to heavy weights.

Hence, during the early months of the 1937-38 hog marketing year there was good reason to expect a distribution similar to that shown in other years of high hog-corn ratios.

The question of the total volume of commercial hog slaughter and its seasonal distribution for the marketing year is of great importance to packers in determining their storing and selling policies, and their opinions as to prices and values over the year; this is especially true during the early part of the year when surplus storage stocks are being accumulated. One method of forecasting yearly slaughter is on the basis of the accumulating total as the year advances. Slaughter during the first 3 months (October to December) of the year gives various indications as to what the yearly total may be, depending upon what assumptions are made as to the probable proportion the 3 months' total will be of the 12 months' total. Hence, if the hog-corn ratio tends to cause variation in this proportion, it is an important factor in these calculations.

**S**INCE 1910 there have been 10 years, in addition to this year, when the hog-corn price ratio for the first 3 months (October through December) averaged above 12. And in each of these years, except one, the proportion of October-December slaughter of the 12-month total was below average. In 5 years the ratio was above 14.5 and in each of these years the proportion was much below average. The ratio for October to December of the present year averaged about the highest on record. Hence, it was reasonable to expect that the proportion of the 12-month total this year would be greatly below average.



Present indications are that it may actually be above average.

Similar comparisons of past relationships between the proportions of slaughter during the first 6 months of the marketing year to hog-corn price ratios over the corresponding period indicated that this proportion this year would be below average and that total slaughter would be considerably larger than now seems probable.

**I**T IS NOW definitely known that slaughter for the 3 months, October to December 1937, instead of being considerably smaller than for the 3 months, January to March 1938, was actually larger. There are still 3 months, July to September, to be added to the now known total for the 9 months, October to June, before the marketing year total will be determined. While it is quite probable that slaughter during these 3 months will exceed that of the corresponding period last year, there is little likelihood that it will be large enough to bring the 12 months' total up to what was indicated by slaughter during the early months, and the probable proportion such slaughter would be of the total. Present indications point to a total slaughter not greatly different (perhaps slightly larger) from the 32 to 33 million head forecast in the November Outlook.

There is considerable evidence to indicate that the packing industry last winter, in arriving at storing and selling policies, tended to give considerable weight to the total marketing year slaughter as indicated by the number

slaughtered from October through December. And, no doubt, opinions as to prices were influenced by the expectation of a larger slaughter than will actually take place.

**A** NUMBER of reasons might be given to explain why the seasonal distribution of slaughter has not followed the pattern for other years of high hog-corn price ratios. For example, the relatively larger slaughter in the first quarter may be attributed in part to the fact that, because of the shortage of corn in a number of States as a result of the 1936 drought, a considerable number of hogs that ordinarily would have been marketed in the closing months of the preceding marketing year were held for finishing on new-crop corn. Another factor was the unusually wide spread prevailing last winter between prices of light and heavy hogs. Since prices of heavy hogs were so much lower than those of light hogs many farmers doubtless figured that they would lose the value of the additional corn necessary to feed to heavy weights.

A third reason is that in the Corn Belt west of the Missouri River, where a large proportion of the spring pig crop is usually marketed after January 1 and at relatively heavy weights, corn production was again short in 1937. Not only was the proportion of total hog production in this area much below average last year but the small number of hogs was marketed earlier than usual.

C. L. HARLAN.

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## New Techniques in Standardization

**S**CIENCE, technology, and ingenuity have combined to further the refinement and accuracy of the farm products standardization and grading work of the Bureau of Agricultural Economics. It is true that many of the standards are still more or less empirical; that the grading of some commodities rests to a considerable extent upon the expertness of the

grader. But real progress has been made in substituting exact mechanical, chemical, and other tests and devices for the human judgment and skill that involve human variations.

Whereas in previous years it was often necessary to describe a factor of quality in rather general terms, it is now possible to give it a specific value. Where expert estimation was formerly

used there are now apparatus or tests that measure exactly. In some methods of grading that are still the same in general outline, certain steps of procedure have been perfected by new apparatus, tests, or methods.

**E**XTENSIVE and intricate apparatus, much of it developed or designed by members of the staff, are being used in the Bureau's cotton standardization laboratories. Here the rooms are equipped with special skylights, and subjected to practical or complete air conditioning and to humidification before they are considered suitable for the standardization work.

Among the pieces of special laboratory equipment more readily understood are an improved cotton-fiber sorting machine that permits the measuring of fiber lengths with a high degree of accuracy, a bundle fiber test for strength of cotton fibers, and an improved cotton-waste analyser that separates the different elements in the waste for intensive study.

Quality factors of the strictly perishable fruits and vegetables seemed at first to defy mechanical apparatus. Now a saccharimeter is used to determine the sugar content of grapes, a sugar acid test is made to learn the maturity of citrus fruits, and the specific gravity test is used to learn the maturity of cantaloups in the States that have laws prohibiting the shipment of immature melons.

Penetrometers ascertain the consistency of certain canned products such as canned pumpkin, hydrometers test the density of sirups, salinometers test brine solutions, and a fruit pressure tester to ascertain the maturity of canned peaches and pears is in process of development.

**C**OLOR is an important quality factor in several agricultural commodities. For years it was an elusive and baffling element. The color of cotton, for instance, ranges from creamy whites to flat whites and from blue-stained through gray, spotted, yellow-tinged to deep yellow-stained.

These differences affect the utility and the prices of the cotton. It was believed that these colors were not altogether stable—that further bleaching and yellowing may take place.

Notable progress has now been made in developing techniques and apparatus for measuring color in a practical way. The technicians are studying changes in cotton colors and the conditions or combinations of conditions that are likely to bring about these changes. Degrees of color are quality indicators of commodities as far apart as hay and canned tomatoes.

**G**RAIN standardization and grading work has produced many official inventions. Ten public-service patents have been issued to Bureau workers in this field alone—patents that allow the invention to be manufactured and used by the people without the payment of any royalty.

Devices include the so-called Boerner sampler for determining the test weight per bushel of grain—one of the chief grading factors. In grading grain for export, the public-patent ship sampler takes complete cross-sections from the falling grain as it leaves the delivery spout for the hold of the ship, so that several samples, when combined, accurately represent a shipment of grain. A standard method of determining the protein content of wheat has been developed and is now in use.

**T**HE new techniques and devices in standardization work relate both to the formulation of standards and to their practical application through grading and inspection. Some, by measuring more factors, make it possible to increase the comprehensiveness of a standard. Some increase accuracy in formulation and in application. Some make for uniformity among the workers. Some save time in procedures. All contribute toward progress in improvement which is the hall mark of the standardization work of this decade.

C. B. SHERMAN.

# Livestock Slaughter by Four National Packers

**L**IVESTOCK slaughtering and meat processing on a wholesale scale is carried on in the United States by a large number of concerns. The plants of these concerns are located in nearly every State but the industry is concentrated largely in the eastern two-thirds of the country and especially in the upper Mississippi valley which is the source of the greater part of the supply of animals finished for slaughter.

Outstanding in the industry are four large concerns operating on a Nation-wide basis and having a volume of business of such great magnitude as to invest them with special public interest not ordinarily held by lesser concerns. These four large concerns organized as corporate enterprises have been in business for many years. At the close of 1937 they were operating 88 slaughtering plants.

Between 1930 and 1937 these four concerns purchased or built a total of 30 slaughtering plants, but 12 of those acquired are no longer operated, making a net gain of 18 plants during the period. During the first 2 months of 1938 three additional plants were acquired.

Most of the plants acquired since 1930 were purchased from other concerns as only a few were built by these companies. Most of the acquisitions are located in the Southern States and in the Corn Belt. Some are located at public stockyard markets and the others at points not immediately adjacent to such markets.

**T**HIS increase in the number of slaughtering plants in recent years has attracted public interest to the changes which may have taken place in the proportion of the total wholesale slaughter handled by these four concerns. Compilations of slaughter records made available to the Department of Agriculture make it possible to present data showing how their combined slaughter has compared with the total

of all wholesale slaughter during the 18-year period, 1920-37.

Federal regulations pertaining to the handling and distribution of meats in interstate commerce make it desirable to classify wholesale slaughter operations into two general classes, *i. e.* those carried on under the supervision of the Federal Meat Inspection Service and those without such supervision. The volume of slaughter in plants operated under Federal inspection is much greater than in the other plants, largely because federally inspected meats are permitted to move in interstate commerce whereas other meats cannot.

All but 6 of the 88 slaughtering plants operated by the 4 national packers have Federal inspection. These on the average are of larger capacity and handle a larger volume of business than the individual plants of other concerns. The total number of all livestock slaughtering plants operating under Federal inspection in December 1937 was 299. Of this number, 255 were in use for slaughtering cattle, 243 for calves, 221 for hogs, and 178 for sheep and lambs.

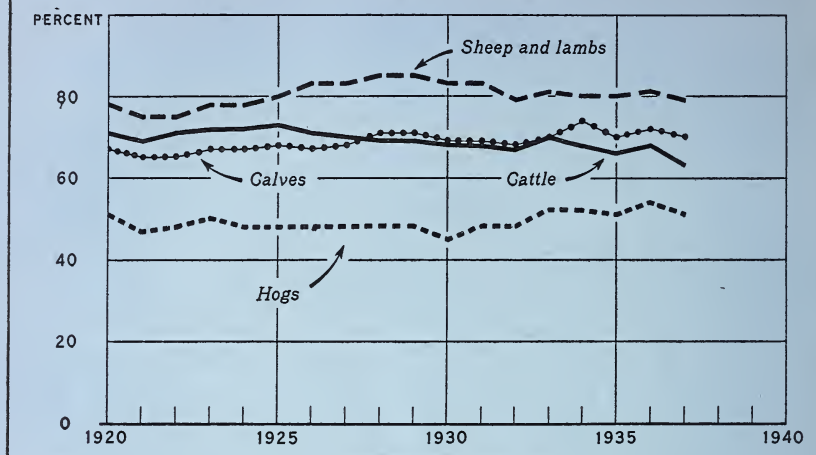
No definite information is available as to the actual number of wholesale slaughtering plants in operation without Federal inspection but it is estimated that the total is probably between 800 and 1,000. Many of these, however, are of very small capacity and do not operate continuously throughout the year.

**D**URING the 5-year period, 1933-37, the 4 large national packing concerns combined handled in their own federally inspected plants 52 percent of the hogs, 65 percent of the cattle, 71 percent of the calves, and 80 percent of the sheep and lambs slaughtered in all plants operating under Federal inspection.

Comparisons of the total slaughter of these 4 concerns with all wholesale



**SLAUGHTER UNDER FEDERAL INSPECTION BY FOUR  
NATIONAL PACKERS, EXPRESSED AS PERCENTAGE OF TOTAL  
SLAUGHTER UNDER FEDERAL INSPECTION, 1920-37**



slaughter, inspected and noninspected, during the same 5-year period show that the proportions handled by these concerns represented 47 percent of the hogs and 55 percent of the cattle, 58 percent of the calves, and 72 percent of the sheep and lambs classified as wholesale slaughter.

Comparisons with estimated total slaughter, wholesale and retail and that on farms, show that the plants of these 4 concerns handle approximately 45 percent of the cattle, 43 percent of the calves, 33 percent of the hogs, and 65 percent of the sheep and lambs slaughtered annually in the United States for food. Of the total meat produced from all yearly slaughter, approximately 42 percent is obtained from the animals slaughtered in the plants of these 4 concerns.

**T**HE trends since 1920 in the proportions handled by the 4 national concerns of the livestock slaughtered under Federal inspection have varied somewhat with respect to the different species of livestock. The trend for cattle has been downward, whereas that for calves has been upward.

The greatest proportion of cattle handled by these concerns in any 1 year was in 1925 when their cattle slaughter under Federal inspection represented

73 percent of all federally inspected slaughter. In 1937 their cattle slaughter comprised 63 percent of the total, which was the smallest proportion handled by them in the 18 years of record.

In 1922 the number of calves slaughtered by the 4 concerns in their federally inspected plants comprised 65 percent of total calf slaughter under Federal inspection. In 1934 the proportion was increased to 74 percent but since that year the trend in their proportion of calves has been slightly downward.

The proportion of hogs slaughtered by the four companies changed little from 1921 to 1932, the combined total averaging about 48 percent during the period. In 1933 the proportion increased to 52 percent and in 1936 it reached a maximum of 54 percent, but last year it dropped to 51 percent.

**T**HE four national concerns handle a larger proportion of the sheep and lambs slaughtered than any other kind of livestock. In 1921 their slaughter of sheep and lambs comprised 75 percent of total federally inspected slaughter of these animals. In 1928 this increased to 85 percent but since that year the proportion has decreased, dropping to 79 percent in 1937.



The slaughter data for these four concerns which were used in making these comparisons were obtained from two sources. The figures for the years 1920 to 1929 were compiled from the records of the Meat Inspection Service of the Bureau of Animal Industry and were assembled for presentation in connection with the hearings for the modification of the Packers Consent

Decree in 1930. Data for more recent years were compiled from monthly reports on slaughter operations furnished by each plant to the Bureau of Agricultural Economics. The two series are in substantial agreement thus making a continuous comparative record for the entire 18 years.

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### Farm Wages Down Slightly

Farm wage rates failed to go up as much as usual from April to July 1 this year. Farmers have had less to spend for hired help about the farm. And with more workers looking for jobs and fewer jobs available, wage rates at the mid-year point were slightly lower than on July 1 last year.

The July 1 demand for farm labor over the country as a whole averaged about 84 percent of normal. That's a 9 percent drop compared with a year ago.

In terms of farm products values, farm wages are higher than a year ago. Since July 1 of last year wages have gone down some. But the decline has been much less than the drop in farm prices. A year ago, farm wages were favorable to farmers; this year they are unfavorable by a big margin.

Farmers' cooperative associations have added over half million members to their ranks in the past decade according to figures obtained in a survey made by the 12 banks for cooperatives of the Farm Credit Administration. The records show 3,270,000 members of marketing and purchasing cooperatives. The 1926 figures of the Department of Agriculture gave a membership of 2,700,000. Illinois now heads the membership map, followed by Minnesota, New York, Iowa, and Wisconsin. Ten years ago Minnesota stood first with Iowa, Illinois, Ohio, and Wisconsin following.

### Measures of Domestic Demand

[1924-29=100]

	June				Percent change		
	1929	1933	1937	1938	1937-38	1933-38	1929-38
National income.....	106.2	60.9	96.6	84.0	-13	+38	-21
Nonagricultural income:							
Total.....	106.9	61.9	96.9	84.9	-12	+37	-21
Per capita.....	101.6	57.3	86.3	75.1	-13	+31	-26
Factory payrolls:							
Total.....	108.7	47.0	100.6	65.5	-35	+39	-40
Per employed wage earner.....	102.7	66.4	99.1	86.2	-13	+30	-16
Industrial production:							
Total.....	117.0	85.2	106.7	72.1	-32	-15	-38
Factories processing farm products.....	103.6	117.2	109.3	89.3	-18	-24	-18
Other factory production.....	123.8	70.6	105.0	61.6	-41	-13	-50
Construction activity:							
Contracts awarded, total.....	104.1	14.9	50.4	44.6	-12	+199	-57
Contracts awarded, residential.....	85.1	11.6	37.6	36.7	-2	+216	-57
Employment in production of building materials.....	94.6	37.2	63.0	47.9	-24	+29	-49
Cost of living:							
Food.....	99.9	62.5	83.1	77.2	-7	+24	-23
"All other items".....	97.8	80.3	84.5	85.2	+1	+6	-13
Purchasing power of nonagricultural income per capita:							
For food.....	101.7	91.7	103.9	97.3	-6	+6	-4
For "All other items".....	103.9	71.4	102.1	88.1	-14	+23	-15

NOTE.—All indexes adjusted for seasonal variation except "Cost of Living."

# General Trend of Prices and Wages

[1910-14=100]

Year and month	Whole-sale prices of all commodities <sup>1</sup>	Industrial wages <sup>2</sup>	Prices paid by farmers for commodities used in <sup>3</sup> —			Farm wages	Taxes <sup>4</sup>
			Living	Production	Living and production		
1920.....	225	222	222	174	201	239	209
1921.....	142	203	161	141	152	150	223
1922.....	141	197	156	139	149	146	224
1923.....	147	214	160	141	152	166	228
1924.....	143	218	159	143	152	166	228
1925.....	151	223	164	147	157	168	232
1926.....	146	229	162	146	155	171	232
1927.....	139	231	159	145	153	170	238
1928.....	141	232	160	148	155	169	239
1929.....	139	236	158	147	153	170	241
1930.....	126	227	148	140	145	152	238
1931.....	107	208	126	122	124	116	217
1932.....	95	179	108	107	107	86	188
1933.....	96	172	109	108	109	80	161
1934.....	109	183	122	125	123	90	153
1935.....	117	192	124	126	125	98	155
1936.....	118	200	122	126	124	107	156
1937.....	126	215	128	135	130	120	-----
June.....	127	220	129	141	134	-----	-----
July.....	128	219	-----	-----	133	123	-----
August.....	128	221	-----	-----	132	-----	-----
September.....	128	216	129	132	130	-----	-----
October.....	125	214	-----	-----	128	126	-----
November.....	122	206	-----	-----	127	-----	-----
December.....	119	208	126	127	126	-----	-----
1938—January.....	118	204	-----	-----	126	111	-----
February.....	116	208	-----	-----	126	-----	-----
March.....	116	208	123	128	125	-----	-----
April.....	115	204	-----	-----	125	115	-----
May.....	114	201	-----	-----	124	-----	-----
June.....	114	202	-----	-----	124	-----	-----

Year and month	Index numbers of farm prices [August 1909-July 1914=100]								Ratio of prices received to prices paid
	Grains	Cotton and cottonseed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1920.....	232	248	191	-----	174	198	223	211	105
1921.....	112	101	157	-----	109	156	162	125	82
1922.....	106	156	174	-----	114	143	141	132	89
1923.....	113	216	137	-----	107	159	146	142	93
1924.....	129	212	125	150	110	149	149	143	94
1925.....	157	177	172	153	140	153	163	156	99
1926.....	131	122	138	143	147	152	159	145	94
1927.....	128	128	144	121	140	155	144	139	91
1928.....	130	152	176	159	151	158	163	149	96
1929.....	120	144	141	149	156	157	162	146	95
1930.....	100	102	162	140	133	137	129	126	87
1931.....	63	63	98	117	92	108	100	87	70
1932.....	44	47	82	102	63	83	82	65	61
1933.....	62	64	74	105	60	82	75	70	64
1934.....	93	99	100	103	68	95	89	90	73
1935.....	103	101	91	125	118	108	117	108	86
1936.....	108	100	100	111	121	119	115	114	92
1937.....	126	95	122	123	132	124	111	121	93
July.....	139	106	145	96	144	116	102	125	94
August.....	119	90	123	104	151	119	109	123	93
September.....	111	74	121	117	144	123	119	118	91
October.....	93	67	99	130	136	128	127	112	88
November.....	85	65	88	124	120	132	135	107	84
December.....	86	64	76	112	111	136	127	104	83
1938—January.....	91	66	70	101	110	128	113	102	81
February.....	89	68	68	121	110	121	94	97	77
March.....	85	70	69	107	117	117	93	96	77
April.....	82	71	68	117	114	110	93	94	75
May.....	79	71	77	99	111	103	98	92	74
June.....	77	58	73	99	116	98	99	92	74
July.....	72	71	79	115	123	101	103	95	77

<sup>1</sup> Bureau of Labor Statistics Index with 1926=100, divided by its 1910-14 average of 68.5.

<sup>2</sup> Average weekly earnings, New York State factories. June 1914=100. Revised.

<sup>3</sup> These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

<sup>4</sup> Index of farm real estate taxes, per acre, 1913=100.

<sup>5</sup> Preliminary.